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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,924	08/11/2006	Takayuki Shibata	WI878.0237	7913
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DICKSTEIN SHAPIRO LLP 1633 Broadway NEW YORK, NY 10019			EXAMINER BAIG, ADNAN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/597,924

Applicant(s)

SHIBATA, TAKAYUKI

Examiner

ADNAN BAIG

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh (Of Record) in view of Ishii et al. US (2004/0202104)

Regarding Claim 1, Itoh discloses a communications system for adaptively controlling a modulation mode and an encoding rate for data transmitted from a transmitter to a receiver, wherein:

said receiver (**see Fig. 6 receiver**) comprises channel quality measuring means (**see Fig. 6, Item 33 & 35**) for measuring a channel quality, (**see Col. 8 lines 62-65 & Col. 10 lines 42-45**)

said transmitter comprises adaptive modulation control means (**see Fig. 2, Item 13 & Col. 6 line 59 - Col. 7 lines 1-4**) for controlling the modulation mode and encoding rate (**see Col. 1 lines 5-17**) in accordance with the channel quality notified from said receiver, (**see Col. 1 line 65 - Col. 2 lines 1-3**)

transmission power control means (**See Fig. 2, Item 10 & Col. 6 lines 38-52**) for controlling a transmission power ratio of the control channel to a data channel in accordance with the modulation mode and encoding rate, (**see Col. 8 Lines 23-28**)

Referring to Fig. 6, Itoh illustrates error detecting unit 40, which determines the error rate of the data channel. The data channel error is notified from the receiver to the transmitter of Fig. 2 for retransmission, (**see Col. 2 lines 4-18 & Col. 11 lines 34-54**)

Itoh does not disclose control channel error detecting means for detecting an error of a control channel, and transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result notified from said receiver, however the limitation is known in the art of communications by evidence of Ishii et al. US (2004/0202104).

Ishii discloses control channel error detecting means (**see Fig. 5, Item 13**) for detecting an error of a control channel, (**see Para [0054-0055] i.e., HS-SCCH (High Speed-Shared Control Channel, Para [0007])**)

Ishii discloses transmission power control means (**see Fig. 5, Item 14**) for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, (**see Para [0057-0060]**)

Ishii teaches when the HS-SCCH (i.e., control channel) temporary maximum transmission power is large, a block error rate of the HS-SCCH of the mobile station of bad communication quality is improved which is effective in that the service quality of the mobile station of bad communication quality is improved, (**see Para [0124]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation and encoding rate by implementing the teachings of Itoh, who discloses a receiver comprising channel quality measuring means for measuring a channel quality, a transmitter comprising adaptive modulation control means for controlling the modulation mode and encoding rate in accordance with the channel quality notified from said receiver, transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with the modulation mode and encoding rate, and an error detection result notified from the receiver, within the teachings of Ishii, who discloses control channel error detecting means for detecting an error of a control channel, and transmission power control means for controlling a

transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, because the teaching lies in Ishii to improve communication quality.

Regarding Claim 2, the combination of Itoh in view of Ishii, disclose the communications system according to claim 1, wherein said transmission power control means includes:

means for independently calculating a control channel error ratio (**Ishii, see Para [0055] i.e., determine if error rate exceeds predetermined value**) for each combination of the modulation mode and encoding rate determined by said adaptive modulation control means, (**Itoh, see Col. 15 line 45 – Col. 16 lines 1-3, i.e., arithmetic operation for difference in signal quality to determine transmission mode**)

means for variably controlling the transmission power ratio of the control channel to the data channel in accordance with the control channel error ratio, (**Ishii, see Fig. 5 & Para [0057-0060]**)

Regarding Claim 3, the combination of Itoh in view of Ishii disclose the communications system according to claim 1, wherein said transmission power control means controls the transmission power ratio of the control channel to the data channel within a range in which the transmission power ratio is independently set for each combination of the modulation mode and encoding rate, (**Itoh, Transmission power is controlled for**

each set of a selected modulation system and code rate (MCS), see Col. 16 lines 7-28, which is referred to as a transmission parameter (range), see Col. 2 lines 35-46).

Regarding Claim 4, the combination of Itoh in view of Ishii disclose the communications system according to claim 1, wherein said transmission power control means controls a transmission power ratio of a pilot channel to the data channel as well as the transmission power ratio of the control channel to the data channel, **(Itoh, see Col. 8 lines (62-67) – Col. 9 lines (1-7))**

Regarding Claim 5, Itoh discloses a transmitter for adaptively controlling a modulation mode and an encoding rate for data transmitted to a receiver, comprising:

adaptive modulation control means **(see Fig. 2, Item 13 & Col. 6 line 59 - Col. 7 lines 1-4)** for controlling a modulation mode and an encoding rate **(see Col. 1 lines 5-17)** in accordance with a channel quality notified from said receiver, **(see Col. 1 line 65 - Col. 2 lines 1-3)**

transmission power control means **(See Fig. 2, Item 10 & Col. 6 lines 38-52)** for controlling a transmission power ratio of a control channel to a data channel in accordance with the modulation mode and encoding rate, **(see Col. 8 Lines 23-28)**

Referring to Fig. 6, Itoh illustrates error detecting unit 40, which determines the error rate of the data channel. The data channel error is notified from the receiver to the transmitter of Fig. 2 for retransmission, (see Col. 2 lines 9-18 & Col. 11 lines 34-54)

Itoh does not disclose transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result notified from said receiver, however the limitation is known in the art of communications by evidence of Ishii et al. US (2004/0202104).

Ishii discloses control channel error detecting means (see Fig. 5, Item 13) for detecting an error of a control channel, (see Para [0054-0055] i.e., HS-SCCH (High Speed-Shared Control Channel, Para [0007]))

Ishii discloses transmission power control means (see Fig. 5, Item 14) for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, (see Para [0057-0060])

Ishii teaches when the HS-SCCH (i.e., control channel) temporary maximum transmission power is large, a block error rate of the HS-SCCH of the mobile station of bad communication quality is improved which is effective in that the service quality of the mobile station of bad communication quality is improved, (see Para [0124])

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation and encoding rate by implementing the teachings of Itoh, who discloses adaptive modulation control means for controlling a modulation mode and encoding rate in accordance with a channel quality notified from said receiver, transmission power control means for controlling a transmission power ratio of a control channel to a data channel in accordance with the modulation mode and encoding rate, and an error detection result notified from the receiver, within the teachings of Ishii, who discloses control channel error detecting means for detecting an error of a control channel, and transmission power control means for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, because the teaching lies in Ishii to improve communication quality.

Regarding Claim 6, the combination of Itoh in view of Ishii disclose, the transmitter according to claim 5, wherein said transmission power control means includes:

means for independently calculating a control channel error ratio (**Ishii, see Para [0055] i.e., determine if error rate exceeds predetermined value**) for each combination of the modulation mode and encoding rate determined by said adaptive modulation control

means, **(Itoh, see Col. 15 line 45 – Col. 16 lines 1-3, i.e., arithmetic operation for difference in signal quality to determine transmission mode)**

means for variably controlling the transmission power ratio of the control channel to the data channel in accordance with the control channel error ratio, **(Ishii, see Fig. 5 & Para [0057-0060])**

Regarding Claim 7, the combination of Itoh in view of Ishii disclose the transmitter according to claim 5, wherein said transmission power control means controls the transmission power ratio of the control channel to the data channel within a range in which the transmission power ratio is independently set for each combination of the modulation mode and encoding rate, **(Itoh, Transmission power is controlled for each set of a selected modulation system and code rate (MCS), see Col. 16 lines 7-28, which is referred to as a transmission parameter (range), see Col. 2 lines 35-46).**

Regarding Claim 8, the combination of Itoh in view of Ishii disclose the transmitter according to claim 5, wherein said transmission power control means controls a transmission power ratio of a pilot channel to the data channel as well as the transmission power ratio of the control channel to the data channel, **(Itoh, see Col. 8 lines (62-67) – Col. 9 lines (1-7))**

Regarding Claim 9, Itoh discloses a communication control method for adaptively controlling a modulation mode and an encoding rate for data transmitted from a transmitter to a receiver, comprising the steps of:

measuring a channel quality in said receiver; (**see Col. 8 lines 62-65 & Col. 10 lines 42-45 & Fig. 6, Item 33 & 35**)

notifying the channel quality from said receiver to said transmitter (**see Col. 1 lines 65-67**), controlling, in said transmitter, a modulation mode and an encoding rate (**see Fig. 2, Item 13 & Col. 6 line 59 - Col. 7 lines 1-4**) in accordance with the channel quality notified from said receiver, (**see Col. 1 line 65 - Col. 2 lines 1-3**)

controlling, in said transmitter, a transmission power ratio (**See Fig. 2, Item 10 & Col. 6 lines 38-52**) of a control channel to a data channel in accordance with the modulation mode and encoding rate, (**see Col. 8 Lines 23-28**)

Referring to Fig. 6, Itoh illustrates error detecting unit 40, which determines the error rate of the data channel. The data channel error is notified from the receiver to the transmitter of Fig. 2 for retransmission, (**see Col. 2 lines 9-18 & Col. 11 lines 34-54**)

Itoh does not disclose detecting a control channel error in said receiver, notifying the control channel error from said receiver to said transmitter, controlling a transmission power ratio of the control channel to a data channel in accordance with a control

channel error detection result notified from said receiver, however the limitation is known in the art of communications by evidence of Ishii et al. US (2004/0202104).

Ishii discloses control channel error detecting means (see Fig. 5, Item 13) for detecting an error of a control channel, (see Para [0054-0055] i.e., HS-SCCH (High Speed-Shared Control Channel, Para [0007]))

Ishii discloses transmission power control means (see Fig. 5, Item 14) for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, (see Para [0057-0060])

Ishii teaches when the HS-SCCH (i.e., control channel) temporary maximum transmission power is large, a block error rate of the HS-SCCH of the mobile station of bad communication quality is improved which is effective in that the service quality of the mobile station of bad communication quality is improved, (see Para [0124])

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to detect a control channel error in a receiver and notify the control channel error to a transmitter and controlling, in said transmitter, a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation and encoding rate by implementing the teachings of Itoh, who discloses measuring a channel quality in a

receiver, notifying the channel quality from said receiver to transmitter, controlling in said transmitter, a transmitter a modulation mode and encoding rate in accordance with the channel quality notified from said receiver, controlling, in said transmitter a transmission power ratio of the control channel to a data channel in accordance with the modulation mode and encoding rate, and an error detection result notified from the receiver, within the teachings of Ishii, who discloses detecting a control channel error, controlling in a transmitter, a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, because the teaching lies in Ishii to improve communication quality.

Regarding Claim 10, the combination of Itoh in view of Ishii disclose, the communication control method according to claim 9, wherein said step of controlling a transmission power ratio includes the steps of:

calculating a control channel error ratio (**Ishii, see Para [0055] i.e., determine if error rate exceeds predetermined value**) independently for each combination of the modulation mode and encoding rate, (**Itoh, see Col. 15 line 45 – Col. 16 lines 1-3, i.e., arithmetic operation for difference in signal quality to determine transmission mode**)

variably controlling the transmission power ratio of the control channel to the data channel in accordance with the control channel error ratio, (**Ishii, see Fig. 5 & Para [0057-0060]**)

Regarding Claim 11, the combination of Itoh in view of Ishii disclose the communication control method according to claim 9, wherein said step of controlling a transmission power ratio includes the step of controlling the transmission power ratio of the control channel to the data channel within a range in which the transmission power ratio is independently set for each combination of the modulation mode and encoding rate, **(Itoh, Transmission power is controlled for each set of a selected modulation system and code rate (MCS), see Col. 16 lines 7-28, which is referred to as a transmission parameter (range), see Col. 2 lines 35-46).**

Regarding Claim 12, the combination of Itoh in view of Ishii disclose the communication control method according to claim 9, comprising the step of controlling a transmission power ratio of a pilot channel to the data channel in accordance with a control channel error detection result notified from said receiver, and the modulation mode and encoding rate, **(Itoh, see Col. 8 lines (62-67) – Col. 9 lines (1-7))**

Regarding Claim 13, Itoh discloses a transmission control method in a transmitter for adaptively controlling a modulation mode and an encoding rate for data transmitted to a receiver comprising the steps of:

controlling the modulation mode and encoding rate rate (**see Fig. 2, Item 13 & Col. 6 line 59 - Col. 7 lines 1-4**) in accordance with a channel quality notified from said receiver, (**see Col. 1 line 65 - Col. 2 lines 1-3**)

controlling a transmission power ratio (**See Fig. 2, Item 10 & Col. 6 lines 38-52**) of a control channel to a data channel in accordance with the modulation mode and encoding rate, (**see Col. 8 Lines 23-28**)

Referring to Fig. 6, Itoh illustrates error detecting unit 40, which determines the error rate of the data channel. The data channel error is notified from the receiver to the transmitter of Fig. 2 for retransmission, (**see Col. 2 lines 9-18 & Col. 11 lines 34-54**)

Itoh does not disclose controlling a transmission power ratio of a control channel to a data channel in accordance with a control channel error detection result notified from said receiver, however the limitation is known in the art of communications by evidence of Ishii et al. US (2004/0202104).

Ishii discloses control channel error detecting means (**see Fig. 5, Item 13**) for detecting an error of a control channel, (**see Para [0054-0055] i.e., HS-SCCH (High Speed-Shared Control Channel, Para [0007])**)

Ishii discloses transmission power control means (**see Fig. 5, Item 14**) for controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, (**see Para [0057-0060]**)

Ishii teaches when the HS-SCCH (i.e., control channel) temporary maximum transmission power is large, a block error rate of the HS-SCCH of the mobile station of bad communication quality is improved which is effective in that the service quality of the mobile station of bad communication quality is improved, (**see Para [0124]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for controlling a transmission power ratio of a control channel to a data channel in accordance with a control channel error detection result notified from said receiver and the modulation and encoding rate by implementing the teachings of Itoh, controlling the modulation mode and encoding rate in accordance with a channel quality notified from said receiver, controlling a transmission power ratio of a control channel to a data channel in accordance with the modulation mode and encoding rate, and an error detection result notified from the receiver, within the teachings of Ishii, who discloses control channel error detecting means for detecting an error of a control channel, and controlling a transmission power ratio of the control channel to a data channel in accordance with a control channel error detection result, because the teaching lies in Ishii to improve communication quality.

Regarding Claim 14, the combination of Itoh in view of Ishii disclose the communication control method according to claim 13, comprising the step of controlling a transmission power ratio of a pilot channel to the data channel in accordance with the control channel error detection result notified from said receiver and the modulation mode and encoding rate, (**Itoh, see Col. 8 lines (62-67) – Col. 9 lines (1-7)**)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/
Examiner, Art Unit 2416

/Huy D Vu/
Supervisory Patent Examiner, Art Unit 2416